

Notice of Allowability

Application No.

10/762,335

Examiner

LUN-YI LAO

Applicant(s)

ANDO, MUNEKI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the preliminary amendment filed on 10/21/2005.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 2/3/2007.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. Figures 15-18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Someya et al(5,091,784) teach an display device having double line scanning.

Masuda et al(6,107,983) teach a display device having a scanning drive circuit(210a) for scanning two line simultaneously(see figures 2 and 4).

Sakai et al(us 2001/0040537) teach a display device having a vertical filter(10)(see figure 21).

Ando(US 2004/0179031) teach a display device having a vertical filter(10)(see figure 14).

Hashimoto et al(5,388,081) teaches a two-dimensional noise filter circuit(see figures 1 and 3).

Carlson(4,602,273) teaches a display having a vertical filter providing zero response at $1/2S$ spatial frequency.

Inoue et al(5,822,008) teach a display having a vertical filter(132) providing $-6.9897\text{db}(10\log_{10}(0.6+0.4X\cos[(2\pi/525)X(525/2)]))$ response at $1/2S(525/2)$ spatial frequency(see figures 4, 12 and 15).

Kwon(5,754,163) teaches an LCD display having a vertical filter(40).

Seigneret et al(6,970,207) teach frequency characteristics of a vertical filter(see figure 2).

Kondo et al(7,116,372) teach frequency characteristics of a vertical filter(see figure 3a-3d).

Busko et al(5,903,319) teach a display apparatus for eliminating of temporal and special distortions from interlaced video signals.

Hosoya et al(5,428,455) teach a display apparatus for reducing noise in the high frequency band.

3. The following is an examiner's statement of reasons for allowance.

None of cited references a display apparatus comprising changing means for changing a vertical scaling filter(13) characteristic of said converting circuit in accordance with the selected scan method, wherein the vertical scaling filter characteristic in the case of said first scan method is a characteristic having a weaker elimination effect on high frequency components as compared with the vertical scaling filter characteristic in the case of said second scan method, with all other limitations cited in claims 1 and 3.

None of cited references a display apparatus comprising a converting circuit for converting the number of scanning lines of an input image signal, wherein a characteristic $H'()$ of the converting circuit is determined such that characteristics $D()$ and $D'()$ are substantially identical with each other, where $D()$ is a vertical spatial frequency characteristic of said image display apparatus which is obtained in a second scan method that is adapted to select one scanning line during one selection period and select the same scanning line only once within one frame, and $D'()$ is a vertical spatial frequency characteristic of the image display apparatus which is obtained in a first scan method that is adapted to simultaneously select a plurality of adjacent scanning lines during one selection period and select the same scanning line twice or more within one frame while a set of scanning lines to be simultaneously selected is being changed, with all other limitations cited in claim 5.

None of cited references a display apparatus comprising a modulating circuit for supplying a modulation signal to said modulation line; and a converting circuit for converting the number of scanning lines of an input image signal, wherein a characteristic $H'()$ of said converting circuit is determined to satisfy $H()=H'().\text{multidot}.J()$ or substantially $H()=H'().\text{multidot}.J()$, where $H()$ is a characteristic of said converting circuit which is used in a second scan method that is adapted to select one scanning line during one selection period and select the same scanning line only once within one frame, $H'()$ is a characteristic of said converting circuit which is used in a first scan method that is adapted to simultaneously select a plurality of adjacent scanning lines during one selection period and select the same scanning line twice or

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more within one frame while a set of scanning lines to be simultaneously selected is changed, and J() is a degradation characteristic of vertical spatial resolution in the same case of said first scan method as compared with the case of said second scan method, with all other limitation cited in claims 6, 8 and 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (571) 272-7671.

February 3, 2007


Lun-yi Lao
Primary Examiner

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